

Variation.—One female measures only 4.3 mm. and has the last abdominal segment proportionately shorter, the petiole a little longer than wide. The male varies in length from 3.5 mm.—4.25 mm., and in one specimen the petiole is blackish-brown. In both sexes the median carina varies considerably and it may consist of two straight parallel carinae, two sinuous subparallel carinae, two strongly posteriorly divergent carinae, or two carinae that diverge from the base of propodeum. In life the color is brighter than described, the abdomen being a beautiful red. The species is very variable in color, the following well-marked forms occurring:

a. *Var. melanocephala*.—Differs from the typical form in having the entire body reddish-brown, only the head being black.

Hollyburn; one female and three males, 5–13 September, 1928–29.

b. *Var. rufifrons*.—Entirely reddish-brown, except the vertex and occiput which are black.

Hollyburn, one female and ten males, 2–16 September, 1928–29.

c. *Var. rufa*.—Entirely reddish-brown, only the eyes and ocelli black, and only the distal four or five antennal joints brown.

Hollyburn, two males, September, 1928–29.

A NEW BITING LOUSE (MALLOPHAGA) FROM WHITE-TAILED DEER.

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Tricholipeurus virginianus,¹ n. sp.

A new species of Mallophaga of the family Trichodectidae has been taken from two white-tailed deer of the United States. It is described herein from three lots of specimens from the Virginia white-tailed deer, *Odocoileus virginianus virginianus* (Boddaert) as follows: 3 males and 2 females collected in Center County, Pennsylvania, on March 28, 1930, by Vernon Bailey (Bishopp No. 13806); 4 males and 13 females collected in Pike County, Pennsylvania, on March 30, 1930, by Vernon Bailey (Bishopp No. 13805); and 28 males and 7 females collected at State College, Pennsylvania, on April 28, 1930, by E. B. Forbes (Bishopp No. 13870). Three lots of specimens of this species were also at hand from the Texas white-tailed deer, *Odocoileus virginianus texanus* (Mearns), as follows: 13 males and 11 females collected in Maverick County, Texas, on December 29, 1915, by J. D. Mitchell (Bishopp No. 5446); 21 males and 29 females collected in Maverick County, Texas, on December 30, 1915, by J. D. Mitchell (Bishopp No. 5447); and

¹The genus *Tricholipeurus* was established by G. A. H. Bedford (in 15th Ann. Rept. of Dir. Vet. Services, Union of South Africa, Pretoria, October, 1929) for those lice on antelopes and deer as differentiated from those on porcupines, formerly all being included in *Eutrichophilus* Mjöberg (Arkiv. f. Zool. Band 6, No. 13, 1910).

6 males and 7 females collected at Sonora, Texas, on November 27, 1922, by O. G. Babcock (Bishopp No. 10677).

This new species is closely related to *Tricholipeurus mazama* (Stobbe) which was described from "*Cervus mexicana*," now known as Coues' white-tailed deer, *Odocoileus couesi* (Gmelin), from Mexico. However, *mazama* is a more slender species than *virginianus* and evidently has the sensory pits on the third segment of the antennae distinctly separated whereas they overlap in *virginianus*. This species is also close to *T. tibialis* (Piaget) and *T. odocoilei* (McGregor). The former species was described from a "black-tailed deer" and is much smaller, has different male genitalia and antennae, and has a dark spot before each abdominal spiracle. The latter species was described from a white-tailed deer, *Odocoileus virginianus macrourus* (Rafinesque), from Montana and is much smaller than *T. virginianus*. *T. parallelus* (Osborn) is very much smaller and has prominent dark spots before the abdominal spiracles and very different male genitalia and antennae.

Description of MALE. *Head* (Fig. 1) wider than long, much wider across forehead than across temples, truncate anteriorly with a wide shallow emargination and produced laterally into the trabecula-like process just before the antennae. True trabeculae not present. Antennal sinuses deep, for attachment of greatly enlarged first antennal segment. Ocular projections rather large, extending to extreme margin of temples which are smoothly rounded and meet the slightly concave occipital margin without an angle. Antennal bands narrow, widening at the front of the head into two plates separated by a narrow median clear space. Occipital bands elongate, almost parallel, being only

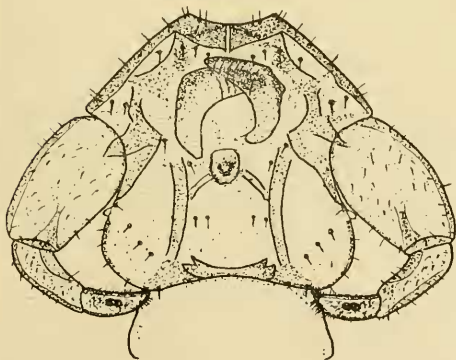


Fig. 1. Head of male, dorsal, X65.

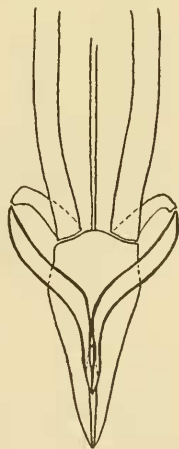


Fig. 2. Genitalia of male, dorsal, X125.

slightly curved. Occiput with a paired forked chitinization on posterior border. Esophageal sclerite present. Two short hairs occur on each side of concave front, two just posterior to each frontal angle, three along outer margin of antennal bands, two very close together just anterior to the trabecula-like process, five on temple, eight in irregular row anterior to mandibles, two before base of antennae, two between base of antennae and esophageal sclerite, a row of four (in two pairs) between esophageal sclerite and occipital margin, and a diagonal row of four from a position anterior to base of ocular projection toward the occipital margin. Antennae large and backward pointing, reaching, if extended, to well beyond the prothorax. First segment greatly enlarged and practically as long as the second and third combined. Second segment longer than the third, both being slightly curved. All three segments have numerous short, hair-like spines; the third segment has three spine-like tubercles at the distal end and a mass of short spines on the opposite side, and has two sensory pits which are somewhat triangular in shape, the distal one overlapping the other.

Thorax one and one-half times as wide as long. Prothorax roughly rectangular in shape with straight posterior margin and with a conspicuous spiracle projecting from each lateral margin. There is a weak spine just before each spiracle, a similar one at each posterior lateral angle, two small hairs near the middle of the segment, and a transverse row of about twelve near the posterior margin. Pterothorax roughly trapezoidal in shape, wider than the prothorax, a group of several spines near each posterior lateral angle and an irregular row of about twenty small hairs near the straight posterior margin. Legs normal, with numerous short spines.

Abdomen elongate oval in shape, widest across the third segment although the fourth segment is almost as wide. Segments one to seven inclusive with a brown transverse band and a transverse row of short hairs on both the dorsal and ventral surfaces. Sutures uncolored. The spiracles on segments two to seven inclusive are situated in the golden brown lateral margin, there being no dark spot anterior to them. Segment eight has a row of rather long pustulated hairs along the dorsal posterior margin and the apical segment has a number of short spines. Genitalia conspicuous (Fig. 2), the basal plate consisting of two chitinous bars reaching into the fifth segment; the parameres are long, tapered and free distally, being fused at their base, and overlaid with a two-pronged dorsal chitinization.

Description of FEMALE. *Head* as in the male except that the hind head is wider, the ocular projection larger, extending slightly beyond the margin of the temples, and the antennal sinus is much more shallow. Trabeculae present but not movable. First segment of the antennae only slightly swollen and shorter than either the second or third, the second segment being slightly longer than the third. Sensory pits on the third segment overlap as on the male antennae.

Thorax and legs as in the male except that the thorax is shorter and wider.

Abdomen oval in shape, slightly longer and wider than in the male. Segment eight with transverse row of six pustulated hairs, the outer ones three times as long as the inner four. Apical segment bilobed with three hairs on each lobe. Venter (Fig. 3) very distinct. Gonapods with combs of long spines and attached

to the movable tergites. A characteristic bilobed (with sharp points) chitinized plate in the center of the apical segment.

Measurements of specimens in mm.

	From <i>O. v. virginianus</i>		From <i>O. v. texanus</i>	
	Average of 35 ♂	Average of 22 ♀	Average of 25 ♂	Average of 30 ♀
Head				
Length.....	.514	.512	.532	.529
Width across Trabeculae.....	.561	.546	.570	.547
Width across Temples.....	.481	.524	.480	.515
Thorax				
Length.....	.307	.289	.298	.271
Prothorax, width.....	.377	.393	.373	.378
Pterothorax, width.....	.459	.487	.465	.481
Abdomen				
Length.....	1.483	1.546	1.571	1.642
Width, Segment III.....	.651	.771	.638	.739
Total length	2.306	2.347	2.401	2.443

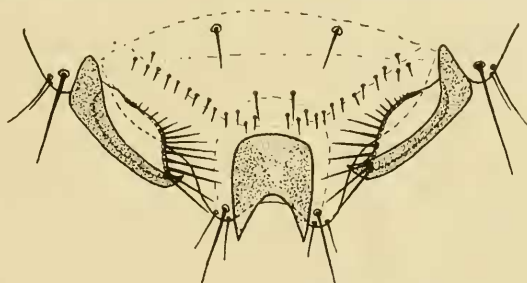


Fig. 3. Apical segment of female, ventral, X65.

It will be noticed that the specimens from *O. v. texanus* are longer and more slender (except head at trabeculae), but since there are no other evident differences between these and the specimens from *O. v. virginianus* I do not desire at this time to distinguish between them.

Type Host.—*Odocoileus virginianus virginianus* (Boddaert).

Type Locality.—Pike County, Pennsylvania.

Type Slide.—Cat. No. 43089, U. S. N. M.

The holotype male and allotype female on the type slide were collected from the type host at the type locality on March 30, 1930, by Vernon Bailey (Bishopp No. 13805). The paratypes are in the collection of the Bureau of Entomology and in my personal collection.